

Appl. No. 09/811,635
Amdt. Dated Oct. 31, 2003
Reply to Office action of Sept. 29, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claims 1, 2 and 6, without prejudice, as follows:

Listing of Claims:

1. (canceled)
2. (canceled)
3. (canceled)
- 2 4. (previously presented) A low-pressure mercury-vapor discharge lamp as claimed in claim 7, wherein the gold content lies in the range between $8 \leq \text{Au} \leq 12$ at. %.
5. (canceled)
6. (canceled)
- 1 7. (previously presented) A low-pressure mercury-vapor discharge lamp comprising (a) discharge vessel,
the discharge vessel enclosing (a) discharge space provided with (a) filling of mercury and (a) inert gas in (a) gastight manner,

the discharge vessel containing an amalgam which communicates with the discharge space,

and the low-pressure mercury-vapor discharge lamp comprising discharge means for maintaining an electric discharge in the discharge space,

the amalgam comprising a bismuth-lead compound having a lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$ at.%, a bismuth content (Bi) in the range between $40 \leq \text{Bi} \leq 65$ at.%, and a mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 0.75$ at.%,

the amalgam further comprising gold, the gold content (Au) lying in the range between $0.1 \leq \text{Au} \leq 20$ at.%.

- 3 8. (previously presented) An amalgam for use in a low-pressure mercury-vapor discharge lamp as claimed in claim 7.

- 4 9. (previously presented) A low-pressure mercury-vapor discharge lamp comprising a discharge vessel,

the discharge vessel enclosing a discharge space provided with a filling of mercury and an inert gas in a gastight manner,

the discharge vessel containing an amalgam which communicates with the discharge space,

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the low-pressure mercury-vapor discharge lamp
comprising discharge means for maintaining an electric
discharge in the discharge space,

the amalgam comprising a bismuth-lead compound having
a lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$
at.%, a bismuth content (Bi) in the range between $40 \leq \text{Bi}$
 ≤ 65 at.%, and a mercury content (Hg) in the range between
 $0.05 \leq \text{Hg} \leq 1$ at.%, and

a temperature of the coldest spot of the discharge
vessel during operation of the lamp being in the range
between 65°C and 165°C.

5 10. (previously presented) The low-pressure mercury-vapor
discharge lamp of claim 9 wherein the temperature of the
coldest spot of the discharge vessel during operation of
the lamp is in the range between 120°C and 165°C.

6 11. (previously presented) The low-pressure mercury-vapor
discharge lamp of claim 9 wherein the amalgam has a
mercury content (Hg) in the range between $0.05 \leq \text{Hg} \leq 0.75$
at.%.

7 12. (previously presented) A low-pressure mercury-vapor
discharge lamp comprising a discharge vessel,

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the discharge vessel enclosing a discharge space
provided with a filling of mercury and an inert gas in a
gastight manner,

the discharge vessel containing an amalgam which
communicates with the discharge space,

the low-pressure mercury-vapor discharge lamp
comprising discharge means for maintaining an electric
discharge in the discharge space,

the amalgam comprising a bismuth-lead compound having
a lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$
at.%, a bismuth content (Bi) in the range between $40 \leq \text{Bi}$
 ≤ 65 at.%, and a mercury content (Hg) in the range between
 $0.05 \leq \text{Hg} \leq 0.75$ at.%, and

the range of nominal operation of the lamp including
operation with an amalgam temperature between 120°C and
165°C.

8 13. (previously presented) A low-pressure mercury-vapor
discharge lamp comprising a discharge vessel,

the discharge vessel enclosing a discharge space
provided with a filling of mercury and an inert gas in a
gastight manner,

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the discharge vessel containing an amalgam which
communicates with the discharge space,

the low-pressure mercury-vapor discharge lamp
comprising discharge means for maintaining an electric
discharge in the discharge space,

the amalgam comprising a bismuth-lead compound having
a lead content (Pb) in the range between $35 \leq \text{Pb} \leq 60$
at.%, a bismuth content (Bi) in the range between $40 \leq \text{Bi}$
 ≤ 65 at.%, and a mercury content (Hg) in the range between
 $0.05 \leq \text{Hg} \leq 1$ at.%, and

the lamp having a radiation output at an optimal
mercury vapor pressure and being configured to operate at
at least 80% of said radiation output over a range of
amalgam temperatures between 65°C and 165°C .